

Amendments to the Claims:

Claims 1-44. (Cancelled)

Claim 45. (Currently amended) A purified nucleic acid comprising a XIAP IRES, wherein if the nucleic acid further comprises nucleotides of a naturally occurring XIAP gene ~~are present 5' or 3' to said XIAP IRES, then said nucleic acid nucleotides of said~~ naturally occurring XIAP gene comprises ~~comprise~~ at least one variant nucleotide ~~within a 500 nucleotide region 5' or 3' to said XIAP IRES, said variant nucleotide being a~~ nucleotide that is not present at the corresponding ~~position of said variant nucleotide~~ in a naturally occurring XIAP gene ~~or XIAP mRNA, relative to the position of said XIAP IRES, wherein said XIAP IRES increases cap-independent translation of a cistron when located upstream from said cistron within a messenger RNA molecule.~~

Claim 46. (Original) The nucleic acid of claim 45, wherein said XIAP IRES increases stress-induced cap-independent translation.

Claim 47 (Cancelled)

Claim 48. (Currently amended) A purified nucleic acid comprising a XIAP IRES,

said XIAP IRES being 5' to a coding sequence that encodes a polypeptide other than a ~~human or murine~~ XIAP.

Claim 49. (Previously amended) A purified nucleic acid comprising a mammalian XIAP IRES, said IRES being 5' to a coding sequence that encodes a polypeptide other than mammalian XIAP.

Claim 50. (Currently amended) A probe ~~purified nucleic acid~~ that hybridizes to a ~~probe comprising~~ at least ten consecutive nucleic acids from ~~the~~ a XIAP IRES mRNA or DNA, said ~~nucleic acid probe not including~~ comprising the full length XIAP cDNA sequence.

Claim 51. (Currently amended) A purified nucleic acid comprising a mammalian XIAP IRES substantially identical to a nucleotide sequence selected from the group consisting of SEQ ID NOs:19-30, wherein, if the nucleic acid further comprises nucleotides of a naturally occurring XIAP gene ~~are present~~ 5' or 3' to said XIAP IRES, ~~said XIAP IRES has a nucleotide sequence substantially identical to a nucleotide sequence set forth in SEQ ID NOs:19-30, wherein then~~ said ~~nucleic acid comprises~~ nucleotides of said naturally occurring XIAP gene comprise at least one variant nucleotide within a 500 nucleotide region 5' or 3' to said XIAP IRES, said variant

nucleotide being a nucleotide that is not present at the corresponding position of said ~~variant nucleotide~~ in a naturally occurring XIAP gene or XIAP mRNA, ~~relative to the position of said XIAP IRES.~~

Claim 52. (Cancelled)

Claim 53. (Currently amended) A purified nucleic acid ~~comprising a nucleotide sequence~~ complementary to at least 14 consecutive nucleotides of a ~~nucleotide sequence~~ of a XIAP IRES nucleic acid ~~nucleic acid selected from the group consisting of:~~

~~a nucleic acid comprising a XIAP IRES, wherein, if nucleotides are present 5' or 3' to said XIAP IRES, said nucleic acid comprises at least one variant nucleotide within a 500 nucleotide region 5' or 3' to said XIAP IRES, said variant nucleotide being a nucleotide that is not present at the position of said variant nucleotide in a naturally occurring XIAP gene or XIAP mRNA, relative to the position of said XIAP IRES, wherein said XIAP IRES increases cap independent translation of a cistron when located upstream from said cistron within a messenger RNA molecule;~~

~~a nucleic acid comprising a mammalian XIAP IRES, said IRES being 5' to a coding sequence that encodes a polypeptide other than mammalian XIAP; and~~

~~a nucleic acid comprising a mammalian XIAP IRES, wherein said XIAP IRES has a nucleotide sequence substantially identical to a nucleotide sequence set forth in SEQ ID~~

~~NOs: 19-30, wherein said nucleic acid comprises at least one variant nucleotide within a 500 nucleotide region 5' or 3' to said XIAP IRES, said variant nucleotide being a nucleotide that is not present at the position of said variant nucleotide in a naturally occurring XIAP mRNA, relative to the position of said XIAP IRES.~~

Claim 54. (Currently amended) ~~The~~ An expression vector comprising a nucleic acid of claim 47, 45, 48, 49, 52, or 5153, ~~wherein said nucleic acid is contained within an expression vector and wherein said expression vector encodes a transcription unit comprising a XIAP IRES and a coding sequence for a polypeptide.~~

Claim 55. (Currently amended) The expression vector ~~nucleic acid~~ of claim 54, wherein said expression vector directs expression of a coding sequence that encodes a polypeptide that is not a XIAP polypeptide.

Claim 56. (Currently amended) The ~~nucleic acid~~ expression vector of claim 54, wherein said expression vector is a gene therapy vector.

Claim 57. (Currently amended) A vector ~~containing nucleic acid~~ comprising a XIAP IRES, wherein said ~~nucleic acid comprising said XIAP IRES is positioned to direct expression of a 5' to nucleic acid encoding a polypeptide, wherein said polypeptide is~~

selected from the group consisting of: XIAP, NAIP, TIAP, HIAP1, HIAP2, VEGF, BCL-2, BDNF, GDNF, PDGF-B, IGF-2, NGF, CTNF, NT-3, NT-4/5, EPO, insulin, TPO, p53, VHL, XAF, BAX, BCL-X_L, BAD, BCL-X_S, and caspases 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

Claim 58. (Currently amended) The vector of claim 57, wherein said vector further comprises ~~a promoter, wherein said promoter is~~ a tissue-specific promoter.

Claims 59-67. (Cancelled)

Claim 68. (New) The nucleic acid of claim 53, wherein said nucleic acid is complementary to a nucleic acid sequence selected from the group consisting of SEQ ID NOs:19-30.

Claim 69. (New) A purified XIAP antisense molecule comprising a base sequence complementary to at least 10 consecutive nucleotides of a XIAP IRES, wherein said antisense molecule inhibits transcription or translation.

Claim 70. (New) The XIAP antisense molecule of claim 69, wherein said antisense molecule inhibits cap-independent translation from said XIAP IRES in a cell by at least 10%

Claim 71. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 14-18 nucleotides of said XIAP IRES.

Claim 72. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 25 nucleotides of said XIAP IRES.

Claim 73. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 40 nucleotides of said XIAP IRES.

Claim 74. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -153 through -139 of SEQ ID NO:2.

Claim 75. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -46 to -35 of SEQ ID NO:2.

Claim 76. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -268 to -1 of SEQ ID NO:2.

Claim 77. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -162 to -1.

Claim 78. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -161 to -1.

Claim 79. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -83 to -1.

Claim 80. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -162 to -35.

Claim 81. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -161 to -35.

Claim 82. (New) The XIAP antisense molecule of claim 69, wherein said base sequence is complementary to at least 10 consecutive nucleotides at position -268 to -35.

Claim 83. (New) The XIAP antisense molecule of claim 69, wherein said molecule is an antisense RNA molecule.

Claim 84. (New) A vector encoding the XIAP antisense molecule of claim 69.

Claim 85. (New) A cell comprising the vector of claim 83.

Claim 86. (New) A purified XIAP antisense molecule comprising a base sequence that hybridizes at high stringency to a XIAP IRES, wherein said antisense molecule inhibits transcription or translation.

Claim 87. (New) The purified XIAP antisense molecule of claim 86, wherein said antisense molecule inhibits cap-independent translation from said XIAP IRES in a cell by at least 10%.

Claim 88. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes under high stringency conditions to said XIAP IRES.

Claim 89. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes to bases at positions -153 through -139 of SEQ ID NO:2.

Claim 90. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes to bases at position -46 to -35 of SEQ ID NO:2.

Claim 91. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes to bases at position -268 to -1 of SEQ ID NO:2.

Claim 92. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes to bases at position -162 to -1 of SEQ ID NO:2.

Claim 93. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes to bases at position -161 to -1 of SEQ ID NO:2.

Claim 94. (New) The antisense molecule of claim 86, wherein said nucleotides hybridizes to bases at position -83 to -1 of SEQ ID NO:2.

Claim 95. (New) The antisense molecule of claim 86, wherein said nucleotides hybridizes to bases at position -162 to -35 of SEQ ID NO:2.

Claim 96. (New) The antisense molecule of claim 86, wherein said nucleotides hybridizes to bases at position -161 to -35 of SEQ ID NO:2.

Claim 97. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes to bases at position -268 to -35 of SEQ ID NO:2.

Claim 98. (New) The antisense molecule of claim 86, wherein said base sequence hybridizes to the polypyrimidine tract of SEQ ID NO:2.

Claim 99. (New) A method for treating cancer in a subject, said method comprising contacting a cell of said subject with the antisense molecule of claim 69 or 86, wherein said antisense molecule increases said cell's susceptibility to apoptosis.

Claim 100. (New) The method of claim 99, wherein said cell is a mammalian cell.

Claim 101. (New) The method of claim 99, wherein said cell is a human cell.

Claim 102. (New) The method of claim 99, wherein said cell is a neoplastic cell.

Claim 103. (New) A pharmaceutical composition comprising the antisense molecule of claim 69 or 86 and a pharmaceutical excipient, wherein said antisense molecule is present in an amount sufficient to treat cancer in a patient.